AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A friction force measurement apparatus which measures friction force between a fixed member fixed on a main body of a magnetic tape drive and a magnetic tape abrading the fixed member, the apparatus comprising:

a vibration detector which is joined with said fixed member and detects a vibration in abrasion of said magnetic tape with said fixed member; and

a calculation device which calculates the friction force between said fixed member and said magnetic tape based on a signal from said vibration detector,

wherein said fixed member is a guide portion regulating a width direction of a magnetic tape.

2. (original): A friction force measurement apparatus according to claim 1, wherein a vibration input unit in which vibration of said vibration detector is input is directly contacted with said fixed member.

3. (previously presented): A friction force measurement apparatus according to claim 1, wherein a low pass filter having a cutoff frequency of not less than 50 kHz is disposed between said vibration detector and said calculation device.

4. (previously presented): A friction force measurement apparatus according to claim 2, wherein a low pass filter having a cutoff frequency of not less than 50 kHz is disposed between said vibration detector and said calculation device.

5. (previously presented): A friction force measurement apparatus according to claim 1, wherein a recording device records the friction force calculated by said calculation device and records a time associated with the friction force calculated by said calculation device.

6. (previously presented): A friction force measurement apparatus according to claim 2, wherein a recording device records the friction force calculated by said calculation device and records a time associated with the friction force calculated by said calculation device.

7. (previously presented): A friction force measurement apparatus according to claim 3, wherein a recording device records the friction force calculated by said calculation device and records a time associated with the friction force calculated by said calculation device.

8. (original): A friction force measurement apparatus according to claim 1, wherein said fixed member is a magnetic head.

9. (original): A friction force measurement apparatus according to claim 2, wherein said fixed member is a magnetic head.

10. (original): A friction force measurement apparatus according to claim 3, wherein said fixed member is a magnetic head.

11. (original): A friction force measurement apparatus according to claim 1, wherein said vibration detector is an acoustic emission sensor.

12. (original): A friction force measurement apparatus according to claim 2, wherein said vibration detector is an acoustic emission sensor.

13. (original): A friction force measurement apparatus according to claim 3, wherein said vibration detector is an acoustic emission sensor.

14-16. (canceled).

17. (currently amended): A friction force measurement apparatus according to claim 23, wherein said fixed member is a guide portion regulating a width direction of a magnetic tape.

18. (original): A friction force measurement apparatus according to claim 1, wherein said vibration detector is pressed into a head of a screw.

19. (original): A friction force measurement apparatus according to claim 2, wherein said vibration detector is pressed into a head of a screw.

20. (original): A friction force measurement apparatus according to claim 3, wherein said vibration detector is pressed into a head of a screw.

21. (new): A friction force measurement apparatus which measures friction force between a fixed member fixed on a main body of a magnetic tape drive and a magnetic tape abrading the fixed member, the apparatus comprising:

a vibration detector which is joined with said fixed member and detects a vibration in abrasion of said magnetic tape with said fixed member; and

a calculation device which calculates the friction force between said fixed member and said magnetic tape based on a signal from said vibration detector,

wherein said vibration detector is pressed into a head of a screw.

22. (new): A friction force measurement apparatus according to claim 21, wherein a vibration input unit in which vibration of said vibration detector is input is directly contacted with said fixed member.

23. (new): A friction force measurement apparatus according to claim 21, wherein a low pass filter having a cutoff frequency of not less than 50 kHz is disposed between said vibration detector and said calculation device.

24. (new): A friction force measurement apparatus according to claim 21, wherein a recording device records the friction force calculated by said calculation device and records a time associated with the friction force calculated by said calculation device.

25. (new): A friction force measurement apparatus according to claim 21, wherein said fixed member is a magnetic head.

26. (new): A friction force measurement apparatus according to claim 21, wherein said vibration detector is an acoustic emission sensor.

27. (new): A friction force measurement apparatus according to claim 22, wherein a low pass filter having a cutoff frequency of not less than 50 kHz is disposed between said vibration detector and said calculation device.

28. (new): A friction force measurement apparatus according to claim 22, wherein a recording device records the friction force calculated by said calculation device and records a time associated with the friction force calculated by said calculation device.

29. (new): A friction force measurement apparatus according to claim 22, wherein said fixed member is a magnetic head.

30. (new): A friction force measurement apparatus according to claim 22, wherein said vibration detector is an acoustic emission sensor.

31. (new): A friction force measurement apparatus according to claim 23, wherein a recording device records the friction force calculated by said calculation device and records a time associated with the friction force calculated by said calculation device.

32. (new): A friction force measurement apparatus according to claim 23, wherein said fixed member is a magnetic head.

33. (new): A friction force measurement apparatus according to claim 23, wherein said vibration detector is an acoustic emission sensor.